

24th REFORM Group Meeting August 27, 2020 – Raitenhaslach
How to reach Carbon Neutrality/Climate Neutrality?

**Implementation of green and sustainable
approach in higher education.
Case study of the Kazakh German University in
Almaty**

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Sustainable development can be defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs. For sustainable development to be achieved, it is crucial to harmonize three core elements: economic growth, social inclusion and environmental protection. These elements are interconnected and all are crucial for the well-being of individuals and societies.”¹

Environmental sustainability

Social inclusion

Economic growth

Policy on sustainable education

SDG 4.7: Global indicator is extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment”.²

	Category	Sub-category
Education for Sustainable Development	Sustainable Development	Economic sustainability, sustainable growth, sustainable production/consumption, green economy
		Social sustainability, (social cohesion re sustainability)
		Environmental sustainability/environmentally sustainable
		Climate change (global warming, carbon emissions/footprint)
		Renewable energy, alternative energy (sources) (solar, tidal, wind, wave, geothermal, biomass...)
		Ecology, ecological sustainability (ecosystems, biodiversity, biosphere, ecology, loss of diversity)
		Waste management, recycling
	Environmental Science (geoscience)	Physical systems
		Living systems
		Earth and space systems

Three-quarters of 78 countries had “some emphasis on sustainable development issues in their curricula over 2005-2015”³

2. <http://uis.unesco.org/sites/default/files/documents/gaml4-measurement-strategy-sdg-target4.7.pdf>

3. <https://gem-report-2016.unesco.org/en/chapter/target-4-7-sustainable-development-and-global-citizenship/>

Sustainable strategies of universities worldwide

“Green” Universities in
Russian Federation



<http://xn--b1afaheyr0d3de.xn--p1ai/>

Ca' Foscari University of
Venice



https://commons.wikimedia.org/wiki/File:Palazzo_Ca%27_Foscari_lato_Canal_Grande.jpg

UCLA University



<https://www.flickr.com/photos/prayitnophotography/6829149340>

Hokkaido University



https://www.tripadvisor.com/Attraction_Review-g298560-d4263414-Reviews-Hokkaido_University_Library-Sapporo_Hokkaido.html

The University Alliance for
Sustainability



<http://www.unica-network.eu/news/freie-universitat-berlin-and-4-other>

Criteria of sustainability in education

	Category	Sub-category
Criteria of sustainability in education	Environmental protection	Setting and Infrastructure (SI)
		Energy and Climate Change (EC)
		Waste (WS)
		Water (WR)
		Education and Research (ED)
		Transportation (TR)
	Social inclusion	Internal organizational culture and behavior
		Overcoming social discrimination
		Provisions for the people with disability
		Partnership with local NGO community and Business
		Community engagement
		Employment and labor practice
	Economic growth	Financial resources allocated to development of sustainable initiatives at the University
		Sustainable procurement

Criteria of sustainability in universities work

	Category	Operation	Education	Research
Criteria of sustainability in universities work	Environmental protection	Setting and Infrastructure (SI)	Education and Research (ED)	Education and Research (ED)
		Energy and Climate Change (EC)		
		Waste (WS)		
		Water (WR)		
		Education and Research (ED)		
		Transportation (TR)		
	Social inclusion	Internal organizational culture and behavior	Partnership with local NGO community and Business sector	Community engagement
		Overcoming social discrimination		
		Provisions for the people with disability		
		Employment and labor practice		
Economic growth	Financial resources allocated to development of sustainable initiatives at the University	Financial resources allocated to development of sustainable initiatives at the University	Financial resources allocated to development of sustainable initiatives at the University	
	Sustainable procurement			

DKU as sustainability-hub



Social
responsibility:
Eco-education



Capacity
building

**Start from
yourself!**



Science innovation
for informed policy



Environmental educational areas at DKU



- Energy and Environment Engineering (BA)
- Resource-saving logistics (MA)
- Integrated Water Resource Management (MA)
- Strategic Management in Renewable Energies (MA)

* about 60 visiting professors from Germany



Solar panels - DKU



Trip "Glaciers2Aral"

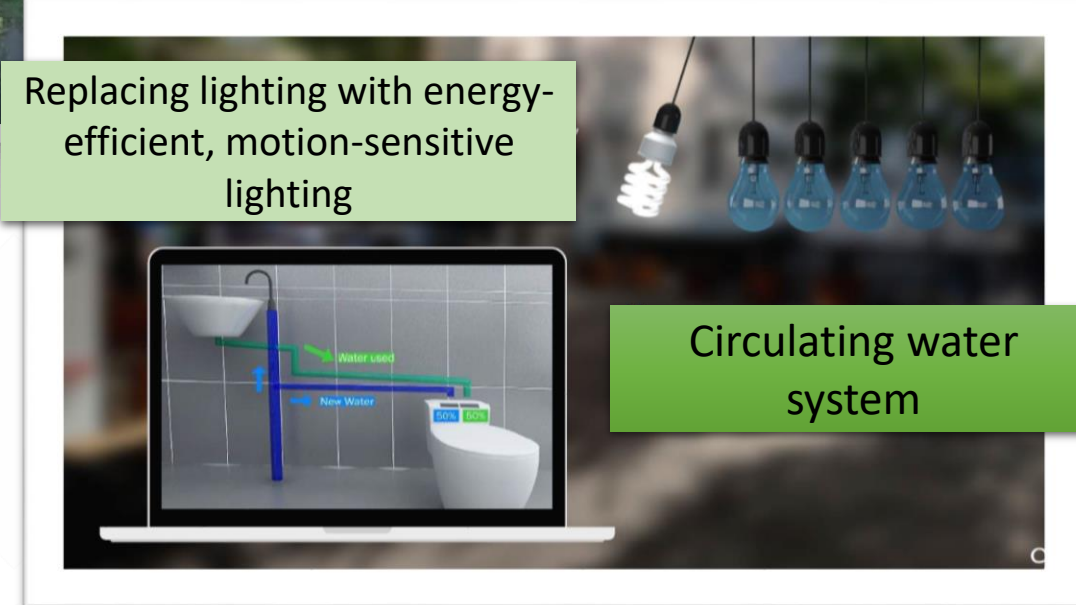
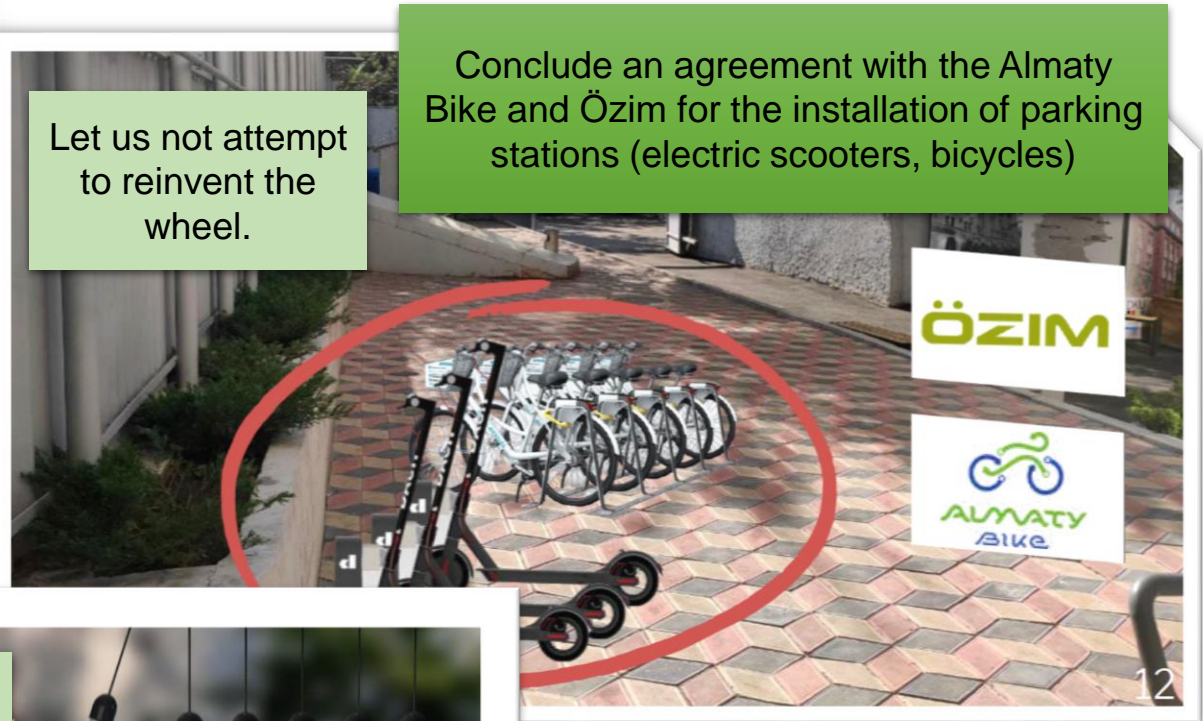
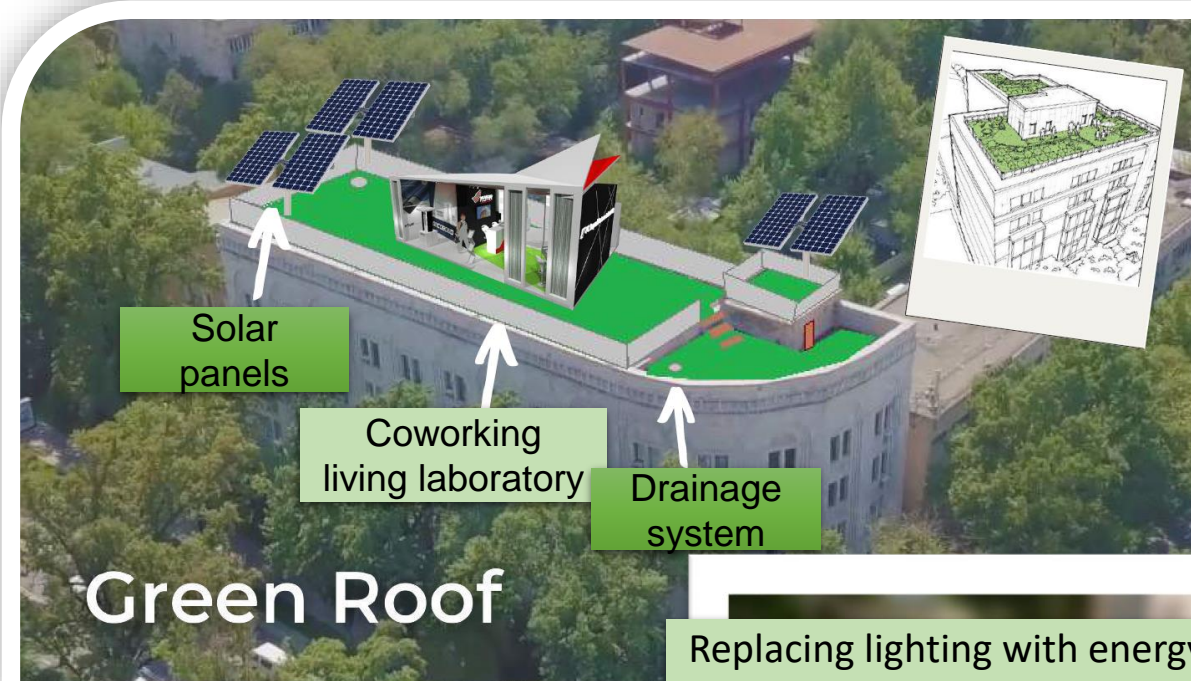


Battery collection campaign



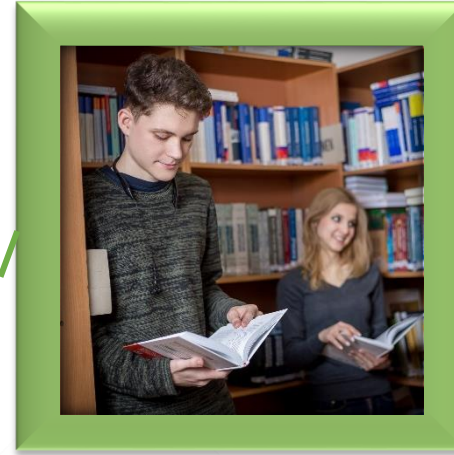
Collection of waste paper for processing

Student Future ECO - Initiatives



DKU as sustainability-hub

**Social
responsibility:
Eco-education**



Capacity
building

Start from
yourself!



Science innovation
for informed policy



Social responsibility: Eco-education

Raising awareness

Trainings for school kids

Manuals for teachers



ECO-Publications

Solar panels for schools

Technical innovations

Raising awareness



Students ECO-Trips:

- Cleaning rivers
- Climate strikes
- Cleaning lakes
- Cleaning mountains
- TV - interviews

Trainings for school kids



“Water - looking from bottom“ training for elementary schools based on manual from project “Integrated Water Resources Management in Central Asia: Model Region Mongolia” (the German Federal Ministry of Education and Research)

Manuals for teachers



More
modules
needed

Modules on policy, administration and economic issues of water resources management and beyond for academic teachers.

Partners: UNECE and UNDP.

ECO-Publications



Eco seminars and publication about ecological situation in Kazakhstan for broad public and decision makers.
Partners: Fond of Dosym Satpaev, OSCE and Friedrich Ebert Foundation.

Solar panels for schools



Solar schools together with Eclareon
(future)

Partner projects in Russia, Uzbekistan,
Kazakhstan.

Technical innovations



E-Learning Workshop and application of rainwater harvesting technology at the Tau-Turgen Central School in Kazakhstan.

Partner: DAAD.

DKU as sustainability-hub



**Social
responsibility:
Eco-education**



**Capacity
building**

**Start from
yourself!**

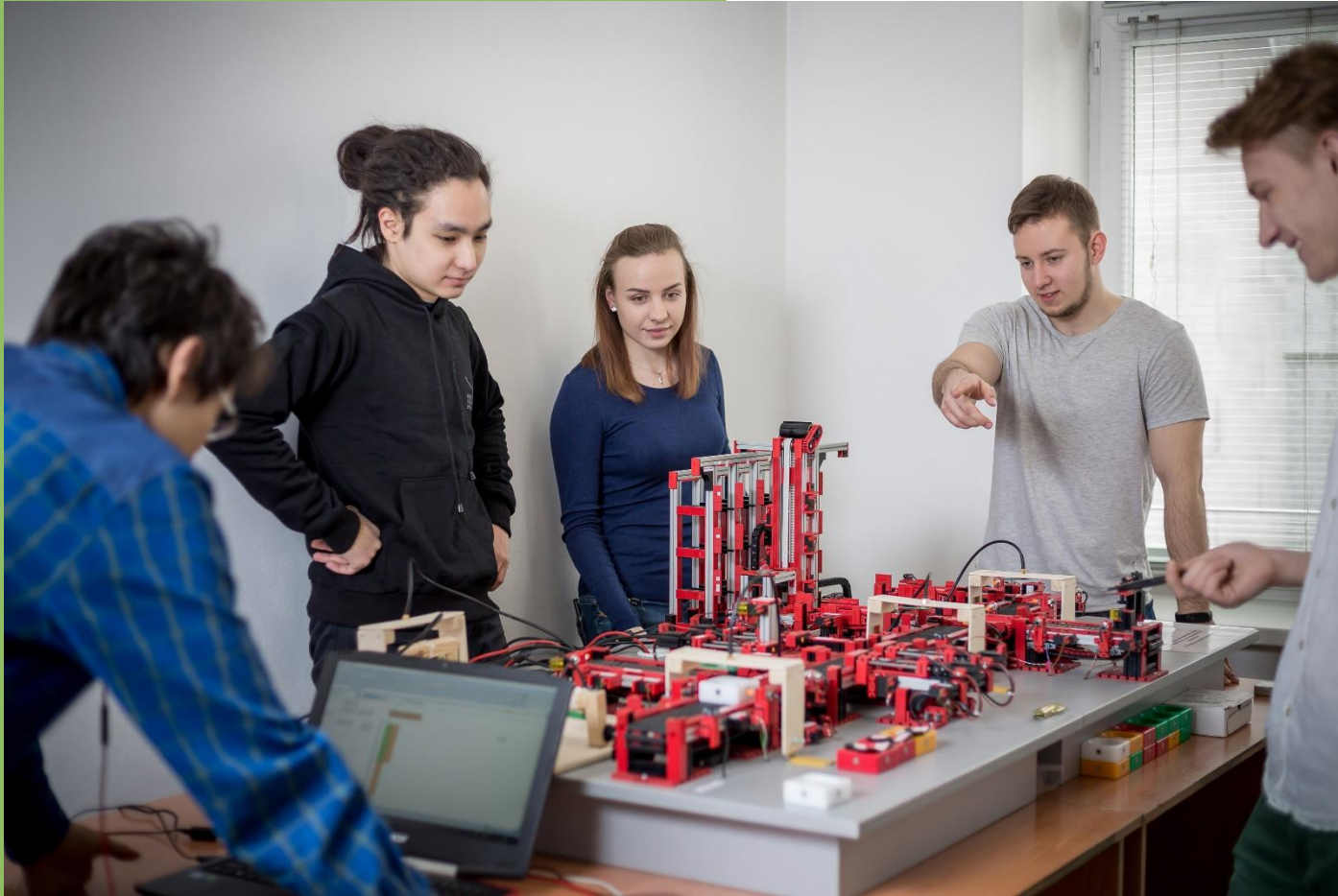


**Science
innovation for
informed policy**



Science innovation for informed policy

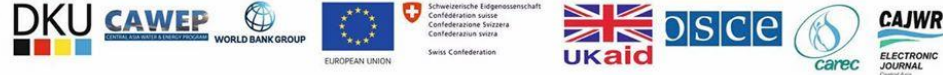
- In answer to the needs of the local community
- Implemented with business partners
- Delivery of policy briefs
- Common researchers on the academic network



Research on “ICT Infrastructure Co-Deployment with Transport and Energy Infrastructure in North and Central Asia”.



Research on “Energy Saving and Energy Efficiency Issues” at DKU.



online conference

WOMEN, WATER AND HEALTH

FEBRUARY 22, 2020

15:00 TO 17:00 (ALMATY TIME)



Research on “Gender Aspects of Water Resources Management: Supporting Young Scientists by Publishing Articles in CAJWR”.

DKU as sustainability-hub



Social
responsibility:
Eco-education



**Capacity
building**

Start from
yourself!



Science innovation
for informed policy



Capacity building

Teacher education



Business



Decision makers



Teacher education



Training for academic teachers based on manuals on policy, administration and economic issues of water resources management.

Partners: UNECE and UNDP.

Environmental business education



International School of Green Business "Eco-Talk" for young eco-entrepreneurs to develop their eco-business ideas.
Partner: WECOOP.

Decision makers



Since 2015 training for young civil servants on climate law and governance in Central Asia
Partners: CAREC, OSCE and CISDL.

Conclusion

- Sustainable university – educational contribution to SDGs.
- Proof your sustainability. Start from yourself! (Operations, education & research)
- Social responsible education.
- Research and innovation for informed policy.
- University as a hub for life long learning (Capacity building).



THANK YOU FOR YOUR ATTENTION!

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